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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,173	09/29/2003	Kalman Pelhos	169.12-0556	1945

164 7590 09/21/2005  
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312 SOUTH THIRD STREET  
MINNEAPOLIS, MN 55415-1002

EXAMINER

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/674,173

Applicant(s)

PELHOS ET AL.

Examiner

Holly Rickman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11,13-15,18,20,21,24,26-31 and 41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11,13-15,18,20,21-24,26-31 is/are allowed.
- 6) ☒ Claim(s) 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The rejection of claims 16-17, 19, and 22-23 under 35 U.S.C. 102(b) as being anticipated by Thoma et al. (US 5569523) is withdrawn in view of the cancellation of these claims.

3. Claim 41 is rejected under 35 U.S.C. 102(b) as being anticipated by Thoma et al. (US 5569523).

Thoma et al. disclose a magnetic recording medium having a seedlayer and magnetic layer disposed on a substrate wherein the magnetic layer has a c-axis and easy axis tilted at an angle with respect to an axis perpendicular to the substrate. The reference teaches the c-axis is also the easy axis direction for cobalt (see col. 10, Table 3, Sample 1-5 wherein 21 and 22 are 63E, i.e.9, about 60E; col. 15, lines 1-21). The reference teaches azimuthal symmetry (i.e. radial or circumferential symmetry) - see Fig. 6a and 6b for example.

Claim 41 also requires that the magnetic layer has a columnar structure wherein the columnar grains are oriented “generally” perpendicular with respect to the substrate surface. The term “generally” adds a degree of latitude in interpreting the term “perpendicular.” The phrase has been interpreted to mean that the columnar structure is oriented approximately

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perpendicularly. The examiner maintains that that columnar structure shown in Fig. 7 meets this limitation.

***Allowable Subject Matter***

4. Claims 1-11,13-15, 18, 20-21 and 27-31 are allowable over the closest prior art to Thoma et al. Thoma et al. is directed to a magnetic recording tape and fails to teach or suggest a motivation to include a soft magnetic layer therein or the use of first and second seedlayers having tilted crystalline structures.

***Response to Arguments***

5. Applicant's arguments filed 7/1/05 have been considered but are not persuasive with respect to claim 41.

Applicant argues that Thoma et al. fail to disclose the claimed columnar structure required by claim 41. Applicant's attention is directed to col. 2, lines 28-32 which discloses that the magnetic layer of the recording medium has a "columnar structure." In addition, claim requires that the columnar structure is "generally" perpendicular with respect to the substrate surface. The term "generally" adds a degree of latitude in interpreting the term "perpendicular." The phrase has been interpreted to mean that the columnar structure is oriented approximately perpendicularly. The examiner maintains that that columnar structure shown in Fig. 7 meets this limitation.

Applicant also argues that Thoma fails to teach a seedlayer structure that "acts as a template for epitaxial growth." The examiner respectfully disagrees. As shown in Fig. 7, the

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grain size and direction of growth of the magnetic layer grains are determined by the grain size and direction of growth of the underlying seedlayer. As such, it is clear that the seedlayer acts as a "template" for epitaxial growth as required by the claim

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Holly Rickman", with a stylized flourish at the end.

Holly Rickman  
Primary Examiner  
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